



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,246	03/15/2004	Tri D. Tran	IL-10314C	2269

7590

06/08/2006

Alan H. Thompson
L-703
P.O. Box 808
Livermore, CA 94551

EXAMINER

WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/801,246

Applicant(s)

TRAN ET AL.

Examiner

Harry D. Wilkins, III

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-14 and 18-20 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Status

1. The rejection grounds based on Farmer have been withdrawn. The Examiner misinterpreted certain claim limitations as well as mischaracterized the teachings of Farmer. Farmer does not an electrical circuit being adapted for switching the polarity of each pair of electrodes. Farmer teaches turning off the power supply for regeneration. Nothing in Farmer indicates that the polarity of the electrodes are changed. In fact, Farmer teaches away from polarity reversal since the end electrodes are referred to as anode and cathode. When the polarity is reversed, the prior anode would become the new cathode and vice versa. Therefore, Farmer does not teach or suggest an electrical circuit adapted for switching the polarity of each pair of electrodes during each deionization cycle.

2. However, the amendment to claim 1 provided by Applicant is not enabled. Therefore, the claims are not allowable at this time.

Specification

3. The disclosure is objected to because of the following informalities: on page 35 of the specification, the information of Table 1 is missing (i.e.-the page is blank except for the title "Table 1"). Applicant is required to submit in an amendment the information of Table 1. Since this information appeared in the parent application(s), no new matter would be introduced by providing the contents of Table 1.

Appropriate correction is required. It is noted that this objection was presented in the first Office Action, but that it was not corrected by Applicant. As some claims are in

Art Unit: 1742

condition for allowance, any communication subsequent to this Office Action should include Table 1 to enable faster allowance upon either cancellation of non-allowed claims or an amendment clearly overcoming the pending rejection grounds.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-7 and 15-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has failed to enable a system containing a single battery of cells (30) that was capable of producing a continuous output of deionized fluid. In paragraph 61 of the specification, Applicant describes the operation with a continuous output of deionized fluid as occurring with at least two batteries.

Allowable Subject Matter

6. Claims 8-14 and 18-20 are allowed.

7. Farmer, nor the rest of the prior art teaches a capacitive deionization-regeneration system as claimed wherein there was an electrical circuit adapted for switching the polarity of each electrode during each deionization cycle. Farmer teaches merely turning off the power supply during the regeneration cycle, not switching the polarity. Further, each electrode in Farmer always operated at the same polarity, i.e.-

Art Unit: 1742

always an anode or always a cathode. Therefore, Farmer does not teach or reasonably suggest an electrical circuit adapted for switching the polarity of each electrode of the pairs during each deionization cycle.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Harry D Wilkins, III
Primary Examiner
Art Unit 1742

hdw